



10-24-05

EF238496531US  
PTO/SB/21 (04-04)  
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Approved for use through 07/31/2006. OMB 0651-0032  
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<b>TRANSMITTAL FORM</b>  (to be used for all correspondence after initial filing)		Application Number	10/807,851
		Filing Date	March 24, 2004
		First Named Inventor	Yi Jiang et al.
		Art Unit	1621
		Examiner Name	Jafar F. Parsa
Total Number of Pages in This Submission	6	Attorney Docket Number	1856-32201 (9422.0-01)

ENCLOSURES (check all that apply)		
<input checked="" type="checkbox"/> Fee Transmittal Form  <input type="checkbox"/> Fee Attached  <input type="checkbox"/> Amendment/Reply  <input type="checkbox"/> After Final  <input type="checkbox"/> Affidavits/declaration(s)  <input type="checkbox"/> Extension of Time Request  <input type="checkbox"/> Express Abandonment Request  <input checked="" type="checkbox"/> Information Disclosure Statement  <input type="checkbox"/> Certified Copy of Priority Document(s)  <input type="checkbox"/> Response to Missing Parts/ Incomplete Application  <input type="checkbox"/> Response to Missing Parts under 37 CFR 1.52 or 1.53	<input type="checkbox"/> Drawing(s)  <input type="checkbox"/> Licensing-related Papers  <input type="checkbox"/> Petition  <input type="checkbox"/> Petition to Convert to a Provisional Application  <input type="checkbox"/> Power of Attorney, Revocation Change of Correspondence Address  <input type="checkbox"/> Terminal Disclaimer  <input type="checkbox"/> Request for Refund  <input type="checkbox"/> CD, Number of CD(s)	<input type="checkbox"/> After Allowance Communication to Group  <input type="checkbox"/> Appeal Communication to Board of Appeals and Interferences  <input type="checkbox"/> Appeal Communication to Group (Appeal Notice, Brief, Reply Brief)  <input type="checkbox"/> Proprietary Information  <input type="checkbox"/> Status Letter  <input checked="" type="checkbox"/> Other Enclosure(s) (please identify below): PTO Form 1449 (3 p.); NINETEEN (19) included references; receipt postcard
Remarks		

SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT	
Firm Or Individual Name	Beatrice C. Ortego - Reg. 54,350
Signature	
Date	October 21, 2005

CERTIFICATE OF TRANSMISSION/MAILING			
I hereby certify that this correspondence is being facsimile transmitted to the USPTO or deposited with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to: Commissioner for Patents, P. O. Box 1450, Alexandria, VA 22313-1450 on the date shown below.			
Typed or Printed Name	Patricia E. Motl		
Signature		Date	October 21, 2005

This collection of information is required by 37 CFR 1.5. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P. O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P. O. Box 1450, Alexandria, VA 22313-1450.

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Effective on 12/08/04.  
Fees pursuant to the Consolidated Appropriations Act, 2005 (H.R. 4818).**FEE TRANSMITTAL  
For FY 2005****Complete if Known**☐ Applicant claims small entity status. See 37 CFR 1.27**TOTAL AMOUNT OF PAYMENT**

(\$180.00)

Application Number

10/807,851

Filing Date

March 24, 2004

First Named Inventor

JIANG, Yi

Examiner Name

Jafar F. Parsa

Art Unit

1621

Attorney Docket No.

1856-32201 (9422.0-01)

**METHOD OF PAYMENT (check all that apply)**☐ Check ☐ Credit Card ☐ Money Order ☐ None ☐ Other (please identify): \_\_\_\_\_☒ Deposit Account Deposit Account Number: **16-1575** Deposit Account Name: **ConocoPhillips Company**

For the above-identified deposit account, the Director is hereby authorized to: (check all that apply)

☒ Charge fee(s) indicated below ☐ Charge fee(s) indicated below, except for the filing fee☒ Charge any additional fee(s) or underpayments of fee(s) ☒ Credit any overpayments  
under 37 CFR 1.16 and 1.17**WARNING:** Information on this form may become public. Credit card information should not be included on this form. Provide credit card information and authorization on PTO-2038.**FEE CALCULATION****1. BASIC FILING, SEARCH, AND EXAMINATION FEES**

Application Type	FILING FEES		SEARCH FEES		EXAMINATION FEES		Fees Paid (\$)
	Fee (\$)	Small Entity Fee (\$)	Fee (\$)	Small Entity Fee (\$)	Fee (\$)	Small Entity Fee (\$)	
Utility	300	150	500	250	200	100	_____
Design	200	100	100	50	130	65	_____
Plant	200	100	300	150	160	80	_____
Reissue	300	150	500	250	600	300	_____
Provisional	200	100	0	0	0	0	_____

**2. EXCESS CLAIM FEES**

Fee Description	Fee (\$)	Small Entity Fee (\$)
Each claim over 20 (including Reissues)	50	25
Each independent claim over 3 (including Reissues)	200	100
Multiple dependent claims	360	180

Total Claims	Extra Claims	Fee (\$)	Fee Paid (\$)
_____ - 20 or HP = _____	x _____	= _____	_____

HP = highest number of total claims paid for, if greater than 20

Indep. Claims	Extra Claims	Fee (\$)	Fee Paid (\$)
_____ - 3 or HP = _____	x _____	= _____	_____

HP = highest number of independent claims paid for, if greater than 3

**3. APPLICATION SIZE FEE**

If the specification and drawings exceed 100 sheets of paper (excluding electronically filed sequence or computer listings under 37 CFR 1.52(e)), the application size fee due is \$250 (\$125 for small entity) for each additional 50 sheets or fraction thereof. See 35 U.S.C. 41(a)(1)(G) and 37 CFR 1.16(s).

Total Sheets	Extra Sheets	Number of each additional 50 or fraction thereof	Fee (\$)	Fee Paid (\$)
_____ - 100 = _____	/ 50 = _____	(round up to a whole number) x _____	= _____	_____

**4. OTHER FEE(S)****Fees Paid (\$)**

Non-English Specification, \$130 fee (no small entity discount)

Other (e.g., late filing surcharge): **SUPPLEMENTAL INFORMATION DISCLOSURE STATEMENT****\$180.00****SUBMITTED BY**

Signature	<i>Beatrice C. Ortega</i>	Registration No. (Attorney/Agent)	54,350	Telephone	(281) 293-4751
Name (Print/Type)	Beatrice C. Ortega	Date	October 21, 2005		

This collection of information is required by 37 CFR 1.136. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 30 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450. If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.



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## IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant(s):	Yi Jiang, et al.	§	Group Art Unit:	1621
		§		
Serial No.:	10/807,851	§	Examiner:	Jafar F. Parsa
		§		
Filed:	March 24, 2004	§	Atty. Dkt. No.:	1856-32201
		§		(9422.0-01)
For:	Process and Apparatus for	§		
	Controlling Flow in a	§		
	Multiphase Reactor	§		

**SUPPLEMENTAL INFORMATION DISCLOSURE STATEMENT**

Date: October 21, 2005

Mail Stop Amendment  
Commissioner for Patents  
P. O. Box 1450  
Alexandria, VA 22313-1450

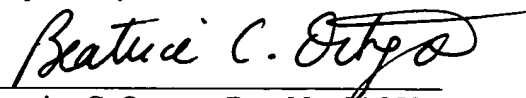
Sir:

This Information Disclosure Statement, including completed Forms PTO/SB/08a and PTO/SB/08b which substitute PTO-1449A and 1449B forms, comprises a list of pertinent art of which Applicants are aware. This information is supplemental to the Information Disclosure Statements and Forms PTO 1449 filed in the above-referenced case on April 8, 2004 and on March 28, 2005.

The submission of this Information Disclosure Statement and the references submitted therewith is not an admission that the art cited is "prior" with respect to the present invention, nor is it a representation, that no better art exists. Applicants hereby reserve the right to swear behind or otherwise disprove any alleged "prior" nature of any art cited should the facts support and the situation warrant such an action. It is submitted that the art cited does not constitute a bar to the patentability of Applicants' invention under 35 U.S.C. § 102 or § 103.

10/25/2005 HLE333 00000150 161575 10807851  
01 FC:1806 180.00 DA

Respectfully submitted,

  
Beatrice C. Ortego - Reg. No. 54,350  
ConocoPhillips Company  
600 North Dairy Ashford  
Houston, TX 77079-1175  
(281) 293-4751  
AGENT FOR APPLICANTS



EF238496531US

PTO/SB/08a 07-05)  
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<b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b>  (use as many sheets as necessary)				<b>Complete if Known</b>	
				Application Number	10/807.851
				Filing Date	March 24, 2004
				First Named Inventor	Yi Jiang et al.
				Group Art Unit	1621
				Examiner Name	Jafar F. Parsa
Sheet	1	of	3	Attorney Docket Number	1856-32201 (9422.0-01)

U.S. PATENT DOCUMENTS					
Examiner Initials*	Cite No. <sup>1</sup>	Document Number	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		Number-Kind Code <sup>2</sup> (if known)			
	AA	US-5384336	01-24-1995	Koros	
	AB	US-6825237	11-30-2004	Schweitzer et al.	
	AC	US-2139943	12-13-1938	Fenske et al.	
	AD	US-2395777	02-26-1946	Brunjes et al.	
	AE	US-2986454	05-30-1961	Jewett	
	AF	US-3230055	01-18-1966	Wolfrom	
	AG	US-4702891	10-27-1987	Li et al.	
	AH	US-6914083	07-05-2005	Hensman	
	AI	US-4313848	02-02-1982	Scott	
	AJ	US-5827902	10-27-1998	Maretto & Piccolo	
	AK	US-6201031	03-13-2001	Steynberg et al	
	AL	US- 5268344	12-07-1993	Pedrick et al	

FOREIGN PATENT DOCUMENTS						
Examiner Initials*	Cite No. <sup>1</sup>	Foreign Patent Document	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T <sup>6</sup>
		Country Code <sup>3</sup> Number <sup>4</sup> Kind Code <sup>5</sup> (if known)				
	AM	WO 99/00191	01-07-1999	Maretto et al		
	AN	GB- 2358816 A	08-08-2001	Bowe & Stairmand		

Examiner Signature		Date Considered	
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\*EXAMINER: Initial reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. 1 Applicant's unique citation designation number (optional). 2 See Kinds Codes of USPTO Patent Documents at [www.uspto.gov](http://www.uspto.gov) or MPEP 901.04. 3 Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). 4 For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. 5 Kind of document by the appropriate symbols as indicated on the document under WIPO Standard St.16 if possible. 6 Applicant is to place a check mark here if English language translation is attached.

The collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P. O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORM TO THIS ADDRESS. Send To Commissioner For Patents, P. O. Box 1450, Alexandria, VA 22313-1450.

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Substitute for form 1449B/PTO  <b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b>  <i>(use as many sheets as necessary)</i>				<b>Complete if Known</b>	
				Application Number	10/807,851
				Filing Date	March 24, 2004
				First Named Inventor	Yi Jiang et al.
				Group Art Unit	1621
Examiner Name	Jafar F. Parsa				
Sheet	2	of	3	Attorney Docket Number	1856-32201 (9422.0-01)

OTHER PRIOR ART -- NON PATENT LITERATURE DOCUMENTS			
Examiner Initials*	Cite No. <sup>1</sup>	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate) title of the item (book, magazine, journal, serial, symposium, catalog, etc), date, page(s), volume-issued number(s), publisher, city and/or country where published.	T <sup>2</sup>
	BA	MARETTO et al, "Design and Optimization of a Multi-Stage Bubble Column Slurry Reactor for Fischer-Tropsch Synthesis," <i>Catalysis Today</i> (March 30, 2001) Vol. 66, Issues 2-4, pp. 241-248	
	BB	URSEANU et al, "A Structured Catalytic Bubble Column Reactor: hydrodynamics and mixing studies", <i>Catalysis Today</i> (Sept. 15, 2001) Vol. 69, Issues 1-4, pp. 105-113	
	BC	DREHER et al, "Liquid-phase Backmixing in Bubble Columns, Structured by the Introduction of Partition Plates", <i>Catalysis Today</i> (Sept. 15, 2001) Vol. 69, Issues 1-4, pp. 165-170	
	BD	FORRET et al, "Influence of Scale on the Hydrodynamics of Bubble Column Reactors: An Experimental Study in Columns of 0.1, 0.4 and 1 m Diameters", <i>Chemical Engineering Science</i> (Feb-March 2003) Vol. 58, Issues 3-6, pp. 719-724	
	BE	SONG et al, "Multiplicity and Sensitivity Analysis of Fischer-Tropsch Bubble Column Slurry Reactors: Plug-flow Gas and Well-mixed Slurry Model", <i>Chemical Engineering Science</i> (June 2003) Vol. 58, Issue 12, pp. 2759-2766	
	BF	ZHAO et al, "Mass transfer to viscous liquids in bubble columns and air-lift reactors: influence of baffles", <i>Chemical Engineering Science</i> (July 1994) Vol. 49, Issue 14, pp. 2359-2369	
	BG	YANG et al, "Liquid backmixing in bubble columns", <i>Chemical Engineering Science</i> (June 8, 1992) Vol. 47, Issues 9-11, 8 pp. 2859-2864	
	BH	FORRET et al, "Liquid Dispersion in Large Diameter Bubble Columns, with and without Internals", <i>The Canadian Journal of Chemical Engineering</i> (June-August 2003) Vol. 81, pp. 360-366	
	BI	MOLERUS et al, "Hydrodynamics of bubble columns in the liquid circulation regime", <i>Chemical Engineering Science</i> (1986) Vol. 41, Issue 10, pp. 2685-2692	
	BJ	KRISHNA, "A scale-up strategy for a commercial scale bubble column slurry reactor for Fischer-Tropsch synthesis", <i>Oil &amp; Gas Science and Technology</i> (2000), Vol. 55 (Issue 4), pp. 359-393	
	BK	BI et al, "A state-of-the-art review of gas-solid turbulent fluidization", <i>Chemical Engineering Science</i> (Nov. 2000) Vol. 55, Issue 21, pp. 4789-4825	

Examiner Signature		Dated Considered	
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\*EXAMINER: Initial reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

<sup>1</sup> Applicant's unique citation designation number (optional). <sup>2</sup> Applicant is to place a check mark here if English language Translation is attached. This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P. O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORM TO THIS ADDRESS. Send To Commissioner For Patents, P. O. Box 1450, Alexandria, VA 22313-1450.

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<b>Examiner Name</b>	Jafar F. Parsa				
<b>Sheet</b>	3	of	3	<b>Attorney Docket Number</b>	1856-32201 (9422.0-01)

OTHER PRIOR ART – NON PATENT LITERATURE DOCUMENTS			
Examiner Initials*	Cite No. <sup>1</sup>	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate) title of the item (book, magazine, journal, serial, symposium, catalog, etc), date, page(s), volume-issued number(s), publisher, city and/or country where published.	T <sup>2</sup>
	BL	SIE et al, "Fundamentals and selection of advanced Fischer-Tropsch reactors", <i>Applied Catalysis A: General</i> (Oct. 4, 1999) Vol. 186, Issues 1-2, pp. 55-70	
	BM	CHEN et al, "Fluid dynamic parameters in bubble columns with internals", <i>Chemical Engineering Science</i> (July 1999) Vol. 54, Issues 13-14, pp. 2187-2197	
	BN	COLMENARES et al, "Fluid-dynamic experimental study in a bubble column with internals", <i>International Communications in Heat and Mass Transfer</i> (April 2001) Vol. 28, Issue 3, , pp. 389-398	
	BO	SCHLUTER et al, "Heat transfer in two- and three-phase bubble column reactors with internals", <i>Chemical Engineering and Processing</i> (June 1995) Vol. 34, Issue 3, pp. 157-172	
	BP	SAXENA et al, "Estimation of gas holdup in a slurry bubble column with internals: nitrogen-Therminol-magnetite system", <i>Powder Technology</i> (1993), Vol. 75, Issue 2, pp. 153-158	
	BQ	KRISHNA et al, "A Strategy for Scaling Up the Fischer-Tropsch Bubble Column Slurry Reactor", <i>Topics in Catalysis</i> (December 2003), Vol. 26, Issues 1-4, pp. 21-28	

<b>Examiner Signature</b>		<b>Dated Considered</b>	
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\*EXAMINER: Initial reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

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